

# **NSF POSTDOCTORAL FELLOWSHIPS IN SCIENCE, MATHEMATICS, ENGINEERING AND TECHNOLOGY EDUCATION (PFSMETE)**

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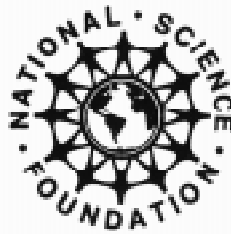
## ***Guidelines for Submission of Applications FY 1999 Announcement***

DIRECTORATE FOR EDUCATION AND HUMAN RESOURCES  
DIVISION OF GRADUATE EDUCATION

**DEADLINE FOR SUBMISSION OF APPLICATIONS: *February 1, 1999***



**NATIONAL SCIENCE FOUNDATION**



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| ■ For General Information (NSF Information Center): | (703) 306-1234                                 |
| ■ TDD (for the hearing-impaired):                   | (703) 306-0090                                 |
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# Postdoctoral Fellowships In Science, Mathematics, Engineering And Technology Education (PFSMETE)

## GUIDELINES FOR SUBMISSION OF APPLICATIONS

The National Science Foundation (NSF) recognizes that Ph.D. graduates in science, mathematics, engineering and technology (SMET) must help the Nation in addressing challenging issues in education across a broad spectrum of institutions and educational levels. NSF anticipates that, in the future, growing numbers of these graduates will assume leadership roles in contributing to the Nation's education enterprise. A variety of institutions will benefit from the contributions of professionals who will have a thorough understanding of topics in education such as how scientific knowledge can be communicated to diverse learners in a variety of settings, how teaching and learning can be assessed, how new disciplinary knowledge can be used in curriculum development, how technology can be used to advance the teaching of SMET education, and how best to carry out program evaluation of complex educational systems.

As a means of preparing individuals with these skills, the Foundation continues to offer Postdoctoral Fellowships in Science, Mathematics, Engineering and Technology Education (PFSMETE). Approximately \$1 M will be available to support up to 20 PFSMETE fellowships in FY 1999, contingent upon availability of funds. The PFSMETE program is aimed at recent Ph.D. graduates in science, mathematics, engineering or technology and seeks to draw broadly on the diversity of talent available in the U.S. population.

### PROGRAM OBJECTIVES

The primary objectives of the program are:

- to prepare Ph.D. graduates in science, mathematics, engineering and technology with the necessary skills to assume *leadership roles* in SMET education in our Nation's diverse educational institutions, and
- to provide opportunities for outstanding Ph.D. graduates to *develop expertise* in a facet of science education research that would qualify them for the new range of educational positions that will come with the 21<sup>st</sup> century.

### ELIGIBILITY

To be eligible for a PFSMETE fellowship, individuals must: 1) be citizens, nationals, or permanent residents of the United States at the time of application; and 2) have received a doctoral degree (Ph.D. or equivalent) in one of the SMET fields supported by NSF on or after January 1, 1995 but no later than October 1, 1999. Because this Program is intended to broaden the skills of Ph.D. graduates in SMET disciplines, **individuals who hold SMET education degrees are not eligible for this Program.**

### RESEARCH PLAN

PFSMETE Fellows have flexibility in the design of a research plan which would be uniquely suited to their professional interests. Disciplinary research that is integral to, and supportive of, the science education research being proposed may be part of this plan. However, it is expected that the principal focus of the Fellows' time will be spent on research that can contribute significantly to augment the knowledge base in some area of science, mathematics, engineering or technology education or on projects that result in the development of new tools or materials that improve teaching and learning in SMET disciplines. The Fellowship is not intended as a simple extension of their Ph.D. work. Research in interdisciplinary fields is highly encouraged. It is also desirable that PFSMETE Fellows spend time developing new sets of skills that will prepare them for future positions with strong emphasis in education. SMET education research may be in a broad range of critical areas across education levels (i.e., K-12, undergraduate, graduate) and may include, but is not limited to:

- **Learning processes.** Disciplinary knowledge may be used to conduct research on how people learn; how cognition is affected by learning styles; how students acquire facts, concepts and skills; how to apply cognitive principles to facilitate effective learning; and what kinds of learning tasks are best suited to different kinds of students.
- **Knowledge transfer / Curriculum development.** Projects may be centered on how SMET content can be communicated to different learners (e.g., different ages, diverse cultural backgrounds, and various learning styles) and how different learning processes can be used to design curricula and instructional materials.
- **Uses of technology as teaching and learning tools.** Research may be focused on how advanced technologies can be used in teaching and learning the changing content of SMET, taking into account the different ways people think, learn and solve problems. The outcome of this kind of research may be of immediate use and application in assisting teachers with the use of computers, newly developed software and other technologies in the classroom. Research can also be conducted on either the development of materials and tools that significantly improve the teaching and learning of SMET or the development of intelligent systems that may be useful in all facets of education, including informal and self-directed learning.

- **Student assessment / Program evaluation.** Emphasis may be placed on investigating various approaches to measuring student achievement or assessing the impact and effectiveness of education projects or large-scale programs. Studies on the relationship between assessment and instructional practices may also be conducted. Other topics may include the development of strategies and tools for evaluating student performance.

PFSMETE awards may not be used primarily for the preparation of a textbook. Limited K-12 or undergraduate teaching may be conducted. It is expected that the host institution will provide additional compensation to the Fellows for such activities (see section “Conditions of Appointment”). Consistent with postdoctoral fellowship programs, PFSMETE Fellows will work under the guidance of one or more principal advisors during fellowship tenure who function as their SMET mentors. The mentors’ names and qualifications should be included in the application, with evidence of their willingness to serve in such a capacity. It is important that each mentor’s knowledge and experience in SMET education (e.g., areas listed above) be described in the application. Applicants interested in seeking a mentor(s) or mentors interested in hosting a Fellow, may have their names posted on the PFSMETE Home Page (see section “PFSMETE Home Page”).

## LOCATION OF WORK

PFSMETE Fellowships will be awarded for research at academic institutions that offer a baccalaureate, master’s or doctoral degree in a field supported by NSF. PFSMETE Fellows may also work in an institution where major science education projects are currently being developed, disseminated or evaluated. PFSMETE Fellows are encouraged to establish collaborative arrangements with other institutions to conduct their activities (e.g., community colleges, technical or vocational institutions, K-12 schools, non-profit institutions, museums). Applicants will be required to submit, with their application, acceptable evidence of support by their chosen institutions (see section “Application Procedures”, Item 8). The Program highly encourages applicants to move to another institution for their postdoctoral work. Applicants interested in remaining at the same institution where they conducted their Ph.D. must clearly justify their reasons for not going elsewhere. The evaluation and selection process will take into account the appropriateness of the institution for the proposed work.

## STIPENDS AND ALLOWANCES

The stipend for PFSMETE Fellowships will be \$3,000 per month. In addition, the Foundation will provide a research allowance to the Fellow of \$500 per month to be used at the discretion of the Fellow for scientific or educational supplies, special travel, publication costs and other research-related expenses. The

Foundation will also provide an institutional allowance of \$750 per month of fellowship tenure to aid in defraying the costs of hosting the Fellow. Although this allowance is expendable at the discretion of the institution, the Foundation strongly encourages that an appropriate portion of this allowance be used to provide health insurance and similar benefits for the Fellows.

## FELLOWSHIP DURATION

PFSMETE Fellowships will be given for a total of 24 months. A recipient of a PFSMETE Fellowship may begin his or her fellowship no later than the beginning of the 1999-2000 academic year. Requests for exceptions to this policy must be justified on the basis of contribution to the goals of the Program and will be considered on a case-by-case basis.

At the successful conclusion of the fellowship activities and contingent upon the availability of funds, the Foundation will consider an extension of support for an additional 12 months. The extension may be in the form of another 12 months of continued fellowship support, or a starter research grant not to exceed \$50,000 to enable the Fellow to initiate an appropriate research program. The latter option is appropriate for those Fellows who have secured a position in an organization in which they can apply the knowledge and experience obtained as a result of their PFSMETE fellowship. The formal proposal for a starter research grant will originate from the employing organization. Funds under such a grant may not be used for the academic-year salary of the Fellow. Further information about the format of a starter research grant proposal will be communicated at a later date to Fellows electing that option. In any case, a recommendation for a third year of support will be made after an internal review based on progress to date and/or the proposed use of the time and funds involved.

## APPLICATION PROCEDURES

Applications may be submitted in hard copy or electronically through the NSF-FastLane process.

**A COMPLETE application must be submitted in hard copy or via FastLane by the published deadline. Electronic and hard copies of applications cannot be combined for submission.** Regardless of the submission process, all applications must have the following components:

1. **PFSMETE cover sheet with certifications and signatures<sup>1</sup> (NSF- Form 1383)**
2. **Abstract of Doctoral Dissertation (Limit: 1 page)**

This page should include a brief description of the doctoral dissertation research.

3. **Abstract of Proposed Research Plan (Limit: 1 page)**

This page should include a brief description of the research plan to be conducted during the period of the fellowship.

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<sup>1</sup> For electronic submission of applications, please follow specific procedures regarding the submission of signed forms through FastLane.

#### 4. Proposed Research Plan (Limit: 3 pages)

This section should describe in detail the components of the research plan to be undertaken during the time of the fellowship and the approaches that will be followed to accomplish it. It should also include a description of the career goals of the applicant with respect to research and science education with comments about how the proposed plan will enhance the applicant's potential to pursue a career with a strong science education component. The applicant should comment on the reasons for selecting the institution(s) and mentor(s).

#### 5. Literature Review (Limit: 1 page)

It is expected that applicants become familiar with the literature related to their proposed area of education research. Therefore, this section should contain an annotated list of references related to the education research proposed. References cited in the research plan should be listed in this section.

#### 6. Curriculum Vitae (Limit: 3 pages)

This section should include the applicant's name; current position; educational background, including dates of conferred degrees; professional accomplishments, including employment history in reverse chronological order; honors; awards; a list of publications; mentoring activities; current and pending grant support; and other information related to the PFSMETE Fellowship.

#### 7. Mentor's Statement (Limit: 2 pages per mentor)

A SIGNED statement from the mentor(s) indicating how the applicant's plan will fit into the mentor's program, how the mentor(s) will contribute to the applicant's research and what role the mentor(s) will play in assisting the applicant in accomplishing the PFSMETE objectives. A brief biographical sketch including the mentor's experience and specific activities conducted in science education should also be included. The mentor(s) name and position should be clearly stated.

#### 8. Institutional Support (Limit: 1 page per institution)

A statement of support from the institution(s) where the applicant expects to conduct his/her activities should be included with the application. A brief description of the status of the Fellow within the institution and opportunities available to him/her should also be included. Any financial commitment or additional support for the applicant from the fellowship institution should be described. A Department Chair, Dean or an Administrative Official who can represent the institution and honor its financial commitments must SIGN this statement.

#### 9. Reference Letters

Three reference letters are required, including one from the thesis advisor if possible. It is important to send ref-

erees a copy of the proposed research plan for their review and comments. Letters should be addressed to the NSF PFSMETE Review Committee and should specifically address at least one of the standard NSF review criteria (*Grant Proposal Guide*, NSF 99-2) and one of the additional criteria listed under the section "Evaluation and Selection."

#### 10. Certification of Completion of the Ph.D. Degree (NSF Form 1405 A)

If the applicant has completed his/her degree by the application deadline, a SIGNED certification should be included with the application. Otherwise, it should be submitted before the Fellowship starts.

### SUBMISSION OF HARD COPY APPLICATIONS

The PFSMETE application consists of six complete sets of the application materials (signed original, plus five copies), one copy of the Supplementary Nominee Information (NSF Form 1225A) attached to the original application only, and one original plus five copies of each of three reference letters as explained below. Applications should be typewritten (single spaced text). Type should be no smaller than 10-point font size. Margins may not be smaller than 2.5 cm, except where margins are established on forms. DO NOT send reprints, pre-prints, theses, budgets and/or any materials not specifically requested in this announcement. Failure to comply with application procedures will disqualify an application from eligibility for merit review. Photocopying of the application forms is permitted and individuals who post this notice are encouraged to share application material included with this notice.

The applicant's name and the heading of each section listed below should appear at the top of each page. Each set of a PFSMETE application should be stapled and ordered following the numbers in the previous section.

**Please note that one complete application with original signatures and 5 copies are required for items 1, 7-10.**

### REFERENCE LETTERS

**One original letter and five copies** all in the same envelope must be collected from each referee by the applicant. Letters should be sent to the applicant in sealed envelopes. Applicants should instruct their referees to mark both sides of the envelope "TO BE OPENED ONLY BY NSF." The envelopes should be addressed to:

NSF- PFSMETE Program  
C/O Name of Applicant  
Applicant's address  
City, State Zip Code

Envelopes should include the Referee's Name, Street Address, City, State, and Zip Code on the upper left-hand corner.

Before signing the letters, referees should indicate if they want to hold their comments in confidence and not to reveal their iden-

tity as authors of the letters. Otherwise, the Foundation may provide the comments to the applicants (if requested) under the Privacy Act of 1974.

All letters of reference in sealed envelopes should be included in the application package. **References that are sent to NSF separately from the application material will be omitted from the review process.**

## SUBMISSION OF ELECTRONIC APPLICATIONS

The NSF FastLane system is available for electronic preparation and submission of an application through the Web at the FastLane Web site at <<http://www.fastlane.nsf.gov>>. All referees of applicants who use FastLane must submit a Reference Report Form using FastLane. Security is provided to ensure that both applications and references can be seen only by authorized persons.

In order to use NSF FastLane to prepare and submit an application, the following are required:

Browser (must support multiple buttons and file upload)

- Netscape 3.0 or greater
- Microsoft Internet Explorer 4.0 or greater

PDF Reader (needed to view/print forms)

- Adobe Reader 3.0 or greater

PDF Generator (needed to create project description)

- Adobe Acrobat 3.01 or greater
- Aladdin Ghostscript 5.10 or greater

To access the NSF FastLane Postdoctoral Research Fellowship Programs process and instructions on its use, click on the appropriate icon on the FastLane Home Page. Additional questions may be directed to Ms. Beverly Sherman at (703) 306-1145, ext. 4615 or via e-mail at [felapp@nsf.gov](mailto:felapp@nsf.gov).

**Warning!** You can submit your application electronically in its entirety ONLY IF you, your mentor(s), and your referees have the appropriate software (e.g. Adobe Acrobat 3.0) to create PDF files. Otherwise, you must submit your application in hard copy. Application forms for hard copy submission may be obtained from the printed Guidelines (NSF 99-17), by printing them off the World Wide Web, or as a byproduct of FastLane. In the latter case, application forms can be filled out using FastLane procedures, and then printed for hard copy submission. Faxed submissions are not acceptable.

## DEADLINE FOR SUBMISSION OF APPLICATIONS

All application submissions must be postmarked or received electronically by February 1, 1999. For hard copy submissions, all sets of materials, forms and reference letters should be submitted as a single unit in a large envelope and addressed:

NSF- PFSMETE Program  
National Science Foundation, Suite 907N  
4201 Wilson Blvd.  
Arlington, VA 22230

Awards are expected to be announced in the spring 1999.

## EVALUATION AND SELECTION

### *Merit Review Criteria.*

Review of applications submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program officers charged with the oversight of the review process. NSF invites the applicant to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Special care is taken to ensure that reviewers have no immediate and obvious conflicts with the applicant. Special efforts are made to recruit reviewers from non-academic institutions, minority serving institutions, adjacent disciplines to that principally addressed in the application, etc.

Applications will be reviewed against the following general merit review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the application and for which he/she is qualified to make judgments.

### **What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the applicant (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

### **What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

### **Integration of Research and Education**

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery

and enrich research through the diversity of learner perspectives. Applicants should address this issue in their applications to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

### **Integrating Diversity into NSF Programs, Projects, and Activities**

Broadening opportunities and enabling the participation of all citizens — women and men, underrepresented minorities, and persons with disabilities — are essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports. Applicants should address this issue in their proposals to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

A multidisciplinary panel of SMET experts including science educators will evaluate PFSMETE applications. Disciplinary Program Directors at NSF will be invited to the panel meeting to observe the PFSMETE review and selection process. In addition to the NSF evaluation criteria described in the *Grant Proposal Guide* (NSF 99-2), Section III A, the following additional criteria will be taken into account:

1. Potential for the proposed research plan to achieve the objectives of the PFSMETE program and potential for contributing to SMET education knowledge.
2. Potential for successful completion of the proposed research by the applicant and continued contributions in the SMET field.
3. Credentials of the mentor(s) for guiding the research and assisting with the professional development of the applicant.
4. Appropriateness of the institutional setting for carrying out the proposed research plan.

PFSMETE Fellows will be selected by the National Science Foundation based on merit as determined by the advice of the external panel using the Foundation's review criteria and the additional factors cited above.

### **Merit Review Process and Associated Customer Service Standard.**

Most of the applications submitted to NSF are reviewed by mail review, panel review, or some combination of mail and panel review.

All applications are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Reviewers will be asked to formulate a recommendation to either support or decline each application. A program officer assigned to manage the application's review will consider the advice of reviewers and will formulate a recommendation. In most cases, applicants will be contacted by the pro-

gram officer after his or her recommendation to award or decline funding has been approved by his or her supervisor, the division director. This informal notification is not a guarantee of an eventual award. NSF will be able to tell applicants whether their applications have been declined or recommended for funding within six months for 95 percent of applications in this category. In those cases where an application is being considered for joint funding by separate divisions, directorates, or agencies, NSF will be able to notify applicants within nine months. The time interval begins on the application deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the division director accepts the program officer's recommendation.

In all cases, after final programmatic approval has been obtained, the recommendation then goes to the Division of Grants and Agreements for review of business, financial and policy implications and the processing and issuance of a grant or other agreement. Applicants are cautioned that only a Grants Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with an NSF program officer. A principal investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants Officer does so at its own risk.

## **CONDITIONS OF APPOINTMENT**

PFSMETE Fellows will be required to devote full time to the plan proposed in the application. Fellowships will start upon request by the Fellow after acceptance of an award offer, but normally no later than October 1, 1999.

A Fellow may not receive remuneration from another fellowship, scholarship, or similar award, or from another Federal grant or contract during the tenure of the award. Institutions may supplement fellowship stipends, without prior permission from the Foundation, up to a maximum of 20 percent of the Fellow's stipend. Such supplements must be in accord with established institution policies. They may be given without any requirement for duties in addition to normal fellowship activities, or they may involve limited teaching or research duties, provided these are compatible with the approved research plan of the Fellow.

Prior Foundation approval is required in all cases in which an institution proposes to supplement in any amount larger than the above established guidelines. Approval will be given only for compelling reasons. It is the Fellow's responsibility to notify the Foundation of any supplement(s), in any amount, as soon as the supplement(s) has received institutional approval.

It is expected that Fellows will carry out their research plans as proposed in their applications. Any major change in the research, duration of the fellowship, or fellowship institution will require prior approval by the National Science Foundation.

Results of research carried out by the Fellows during their PFSMETE fellowships should be made available to the public without restriction, except in matters related to national security of the United States. PFSMETE Fellows are fully responsible for the conduct of such research and preparation of the results

for publication. The Foundation, therefore, does not assume responsibility for such findings or their interpretation.

At the completion of the PFSMETE Fellowship, Fellows are required to submit a final report (NSF Form 98A) to the NSF-PFSMETE Program Director. The report should contain the results of the Fellow's activities. This is particularly important if an extension of the Fellowship or a starter research grant is requested. The Foundation may also engage in assessing the effectiveness and outcomes of the Program at intermediate points during PFSMETE Fellowship tenures.

## **PROGRAM EFFECTIVENESS INDICATORS**

PFSMETE Fellows and their mentors are expected to attend a meeting convened by NSF to exchange ideas, to establish and strengthen communications networks, to learn about the activities the Fellows are conducting, and to discuss ways of measuring progress. This group will also discuss the effectiveness of PFSMETE activities in preparing the Fellows for leadership careers and will plan additional strategies for accomplishing program goals.

Possible indicators of program and project effectiveness that might be considered include: development of creative teaching methods, development of innovative instructional materials, development of other quality research products (e.g., educational technologies, statistical tools, evaluation, methodologies, refereed publications, presentations to professional societies and end-users), and utility to the education community as evidenced by sponsored studies of school systems and evaluations of higher education programs.

## **PFSMETE HOME PAGE**

The PFSMETE Home Page on the Internet (<http://www.ehr.nsf.gov/EHR/DGE/pfse1.htm>) provides information related to the PFSMETE program such as: lists of awardees, brief description of their work, and statistics on the applicant and awardee pool. The Home Page also provides linkages to other Postdoctoral Programs offered by NSF and includes additional information relevant to PFSMETE. The PFSMETE staff periodically updates the PFSMETE Home Page. Applicants are encouraged to access the PFSMETE Home Page for updated information that might be useful in the preparation of their applications.

Applicants seeking mentors and mentors interested in hosting a Fellow may contact the program at [PFSMETE@nsf.gov](mailto:PFSMETE@nsf.gov) for assistance with the inclusion of their names and research interests in the PFSMETE Home Page. This is an experimental effort to facilitate potential linkages between Fellows and Mentors.

## **INQUIRIES**

General inquiries regarding the PFSMETE program may be addressed to Postdoctoral Fellowships in Science, Mathematics, Engineering and Technology Education (PFSMETE), National Science Foundation, Suite 907N, 4201 Wilson Blvd., Arlington, VA 22230. The telephone number is (703) 306-1697, fax number (703) 306-0468. Requests for information via the INTERNET may be addressed to [PFSMETE@nsf.gov](mailto:PFSMETE@nsf.gov).

Copies of this or any other NSF publication may be obtained by writing to the NSF Publications Clearinghouse, P.O. Box 218, Jessup, MD 20794-0218. The PFSMETE announcement number is NSF 99-17. Electronic mail users who have access to INTERNET may order application materials by addressing requests to [pubs@nsf.gov](mailto:pubs@nsf.gov). Requests should include the NSF publication number (NSF 99-17), title, number of copies, requester's name and a complete mailing address. Applications may also be ordered by phone (301) 947-2722.



**FELLOWSHIP  
APPLICATION  
FORM**

National Science Foundation  
Postdoctoral Fellowships in Science, Mathematics,  
Engineering and Technology Education (PFSMETE)

Please type, if possible

**NAME**

Surname

Given Names

Other Names Used

**SOCIAL SECURITY NO.**

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

MAILING ADDRESS for correspondence. It is imperative that you keep NSF informed of a current mailing address.

**CURRENT POSITION**

Department \_\_\_\_\_

Institution \_\_\_\_\_

Title of Position \_\_\_\_\_

Date this position started \_\_\_\_\_

Source of support \_\_\_\_\_

**PROPOSED FELLOWSHIP INSTITUTION** including department and address

**PROPOSED MENTOR** including title

**BRIEF TITLE** of your proposed research

**APPLICATION  
FORM  
Page 2**

National Science Foundation  
Postdoctoral Fellowships in Science, Mathematics,  
Engineering and Technology Education (PFSMETE)

**DOCTORAL DEGREE**

Department and Institution \_\_\_\_\_

Date awarded or anticipated date of receipt \_\_\_\_\_

**REFERENCES** (do not use your mentor)

	Name	Department	Institution	Phone
Ph.D. Advisor	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

**EXPECTED STARTING DATE OF FELLOWSHIP** \_\_\_\_\_ 1, \_\_\_\_\_  
month year

**OTHER SUPPORT**

Have you applied for any other fellowships or similar appointments for all or part of the tenure herein requested? \_\_\_\_\_

If so, name of agency or program: \_\_\_\_\_

Have you ever received a NSF Postdoctoral Fellowship? \_\_\_\_\_

If yes, when and from what program? \_\_\_\_\_

**TELEPHONE NUMBER(S)** where you can be reached during daytime hours until awards are announced.

\_\_\_\_\_

**FAX NUMBER** \_\_\_\_\_

**E-MAIL ADDRESS** \_\_\_\_\_

I have read the program announcement in detail and have noted its conditions.

Signature of applicant \_\_\_\_\_

Date \_\_\_\_\_

THIS APPLICATION IS NOT COMPLETE WITHOUT YOUR SIGNATURE.

## Certifications

National Science Foundation  
Postdoctoral Fellowships in Science, Mathematics,  
Engineering and Technology Education (PFSMETE)

There are three certifications which, by law, must be made before the National Science Foundation can authorize funds for a fellowship award. These concern (1) controlled substances, (2) delinquency on Federal debt, and (3) debarment and suspension.

I certify that:

1. I will not engage in unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in the control of any activity with this fellowship award;
2. I am not delinquent on repayment of any Federal debt; and
3. To the best of my knowledge and belief,
  - a. I am not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.
  - b. I have not within a three-year period preceding my application been convicted of or had a civil judgment rendered against me for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - c. I am not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission or any of the offenses enumerated in paragraph 3.(b) of this certification; and
  - d. I have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

NATIONAL SCIENCE FOUNDATION  
NSF POSTDOCTORAL FELLOWSHIPS IN SCIENCE,  
MATHEMATICS, ENGINEERING AND TECHNOLOGY EDUCATION  
(PFSMETE)  
4201 WILSON BLVD., ROOM 907N  
ARLINGTON, VA 22230

Dear Fellow:

Please be advised that before any NSF-PFSMETE funds can be issued we need to verify that you have received your Ph.D. or that you have completed the work necessary for your doctorate. Two forms of verification are acceptable:

1. You may send an OFFICIAL transcript showing the date the Ph.D. was awarded; or
2. The Dean of the Graduate School (or other proper official at your institution) may complete this sheet by filling in information in the appropriate places below:

A) \_\_\_\_\_ received the Ph.D. degree from  
(Name of Student)  
\_\_\_\_\_ on \_\_\_\_\_  
(Name of Institution) (Date)

OR

B) \_\_\_\_\_ completed all the academic requirements for the Ph.D, degree at  
(Name of Student)  
\_\_\_\_\_ on \_\_\_\_\_  
(Name of Institution) (Date)

\_\_\_\_\_  
(Signature, Dean of Graduate School and/or other proper official at your institution)

\_\_\_\_\_  
(Name of Institution)

\_\_\_\_\_  
(Date)

Please return this sheet or your official transcript to the address above as soon as possible. Thank You. (Note: Do not fax. We need original signature.)

**Supplementary  
Information**

National Science Foundation  
Postdoctoral Fellowships in Science, Mathematics,  
Engineering and Technology Education (PFSMETE)

Submit only ONE copy of this form. Leave the back of the page blank. Do not include this form with any of the other copies, as this may compromise the confidentiality of the information. Please check the appropriate answers to each question for the applicant:

- |   |  |
|---|--|
| <p>1. Is this person<br/>Female <input type="checkbox"/><br/>Male <input type="checkbox"/></p> <p>2. Is this person a<br/>U.S. Citizen <input type="checkbox"/><br/>Permanent Resident <input type="checkbox"/><br/>Other non-U.S. Citizen <input type="checkbox"/></p> | <p>3. Which one of these categories best describes this person's ethnic/racial status? (if more than one category applies, use the category that most closely reflects the person's recognition in the community.)</p> <p>American Indian or Alaskan Native <input type="checkbox"/><br/>Asian <input type="checkbox"/><br/>Black, not of Hispanic Origin <input type="checkbox"/><br/>Hispanic <input type="checkbox"/><br/>Pacific Islander <input type="checkbox"/><br/>White, not of Hispanic Origin <input type="checkbox"/></p> <p>4. Does this person have a disability* which limits a major life activity?<br/>Yes <input type="checkbox"/><br/>No <input type="checkbox"/></p> |
|---|--|

Check here if this person does not wish ☐  
to provide some or all of the above information.

**Required: Check here if this person is currently serving (or has previously served) as PI, CO-PI, or PD on any Federally funded project.** ☐

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**American Indian or Alaskan Native:** A person having origins in any of the original peoples of North America, and who maintains cultural identification through affiliation or community recognition.

**Asian:** A person having origins in any of the original peoples of East Asia, Southeast Asia and the Indian subcontinent. This area includes, for example, China, India, Indonesia, Japan, Korea and Vietnam.

**Black, not of Hispanic Origin:** A person having origins in any of the black racial groups of Africa.

**Hispanic:** A person of Mexican, Puerto Rican, Cuban, central or South American or other Spanish culture or origin, regardless of race.

**Pacific Islander:** A person having origins in any of the original peoples of Hawaii; the U.S. Pacific Territories of Guam, American Samoa, and the Northern Marianas; the U.S. Trust Territory of Palau; the islands of Micronesia and Melanesia; and the Philippines.

**White, not of Hispanic Origin:** A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

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\*Disabled: A person having a physical or mental impairment that substantially limits one or more major life activities; who has a record of such impairment; or who is regarded as having such impairment.

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**WHY THIS INFORMATION IS BEING REQUESTED:**

The Federal Government has a continuing commitment to monitor the operation of its review and award processes to identify and address any inequities based on gender, race, ethnicity or disability of the nominee. To gather information needed for this important task, you should submit a single copy of this form; however, submission of the requested information is not mandatory and is not a precondition of award. Any individual not wishing to provide the information should check the box provided for this purpose. (the exception is information about previous Federal support, the last question above.)

Information from this form will be retained by Federal agencies as an integral part of their Privacy Act Systems of Records in accordance with the Privacy Act of 1974. These are confidential files accessible only to appropriate Federal agency personnel and will be treated as confidential to the extent permitted by law. Data submitted will be used in accordance with criteria established by the respective Federal agency for awarding grants for research and education, and in response to Public Law 99-383 and 42 USC 1885c.

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

*Facilitation Awards for Scientists and Engineers with Disabilities (FASSED)* provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the program announcement or contact the program coordinator at (703) 306-1636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090 or through FIRS on 1-800-877-8339.

The catalog of Federal Domestic Assistance Number is 47.076, Education and Human Resources.

## **PRIVACY ACT AND PUBLIC BURDEN STATEMENTS**

The information requested on the application materials is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified applicants and may be disclosed to qualified reviewers and staff assistants as part of the review process; to the institution the nominee, applicant or fellow is attending or is planning to attend or is employed by for the purpose of facilitating review or award decisions, or administering fellowships or awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing data regarding applicants or nominees as part of the proposal review process, or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information from this system may be merged with other computer files to carry out statistical studies the results of which do not identify individuals. Notice of the agency's decision may be given to nominators, and disclosure may be made of awardees' names, home institutions, and fields of study for public information purposes. For fellows or awardees receiving stipends directly from the government, information is transmitted to the Department of the Treasury to make payments. See System of Records, NSF-12, "Fellowships and Other Awards," 63 Federal Register 265 (January 5, 1998). Submission of the information is voluntary; however, failure to provide full and complete information may reduce the possibility of your receiving an award.

The public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Reports Clearance Officer; Information Dissemination Branch, DAS; National Science Foundation; Arlington, VA 22230.

**NATIONAL SCIENCE FOUNDATION**

ARLINGTON, VA 22230

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CFDA 47.076

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P.T.:22

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NSF 99-17  
(Replaces NSF 97-166)